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09/690,273	10/17/2000	Fan Kong	CSCO2337	2199

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EXAMINER

TANG, KUO LIANG J

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/690,273

Applicant(s)

KONG, FAN

Examiner

Kuo-Liang J Tang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 June 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-20, 22-26 and 40-53 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7, 9-20, 22-26 and 40-53 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Office Action is in response to the amendment filed on 6/14/2004.

The priority date for this application is 10/17/2000.

Claims 1-7, 9-20, 22-26, and 40-46 are amended, claims 8, 21 and 27-39 are cancelled.

Claims 47-53 are added.

Claims 1-7, 9-20, 22-26 and 40-53 are pending and have been examined.

Response to Arguments

2. Applicant's arguments with respect to claims 1-7, 9-20, 22-26 and 40-53 have been considered but are moot in view of the new ground(s) of rejection.

Claims 1, 14, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (hereinafter AAPA).

Claims 2-7, 9-13, 15-20, 22-26 and 41-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Layman.

Claim 53 is rejected under 35 U.S.C. 112, first paragraph.

In the remarks, the applicant argues that:

- (1). The amendments to the claims do not add any new matter to this application. Furthermore, the amendments to the claims were made to improve the readability and clarity of the claims and not for any reason related to patentability (E.g. see RE page 13, lines 5-8).

- (2). Applicant argues that Layman does not disclose any type of begin option node (E.g. see RE page 16, line 4).

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Examiner's response:

(1). The examiner does not agree the Applicant's assertion that the amendments just to improve the readability and clarity of the claims and not for any reason related to patentability. The amendments necessitated the new ground(s) of rejection presented in this Office action.

(2). The examiner does not agree the Applicant's assertion that Layman does not disclose any type of begin option node. In fact, the examiner interprets that heading as begin option node (see e.g. see Figure 2a-2c, heading 1 and Figure 3, node 19 and associated text).

Claim Objections

3. Claims 47 and 52 are objected to because of the following informalities:

Claim 47, lines 8 and 10, "being" should be "begin".

Claim 52, line 4, "being" should be "begin".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 53 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 53, lines 10-11, "Scanning the linear command regeneration template to find an end option node template that includes an identification of the begin option node template;" and lines 14-17 "evaluating at least one branch in the linear node template from linear command regeneration template by the evaluate branches process; finding a branch in the linear node template; and validating the branch using the configuration data stored in the network device"

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 14, 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's admitted prior art (hereinafter AAPA).

As Per Claim 1, AAPA teaches in a network device (E.g. see SPEC, page 1, line 18, router) configured by a configuration command (E.g. see SPEC, page 1, line 19, command), a method for automatically re-constructing said configuration command (E.g. see SPEC, page 2,

line 6, "... regenerate the original configuration command") based on data stored in a configuration database (E.g. see SPEC, page 1, lines 22-23, system configuration database) during parsing and processing of the configuration command by the network device, the method comprising the steps of:

"creating and storing (E.g. see SPEC, page 1, line 18, parser) a linear command regeneration template (E.g. see SPEC, page 1, line 19, binary parse tree) that includes at least one a linear node template (E.g. see SPEC, Fig 1 (Prior Art) and associated text) in a memory, each linear node template corresponding to a command element in said configuration command;" (E.g. see SPEC, page 1, lines 17-23 and Fig 1 (Prior Art) and associated text); and

"regenerating said configuration command using based on said linear command regeneration template and based on data from the configuration database." (E.g. see SPEC, page 2, lines 1-5).

As Per Claim 14, is the memory storing method claim corresponding to the method claim 1 and is rejected under the same reason set forth in connection of the rejection of claim 1.

As Per Claim 40, is the structure claim corresponding to the method claim 1 and is rejected under the same reason set forth in connection of the rejection of claim 1.

6. Claims 2-7, 9-13, 15-20, 22-26 and 41-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Layman, US Patent No. 5,263,174.

As per Claim 2, the rejection of claim 1 is incorporated and AAPA does not explicitly disclose the step of creating and storing a begin option node template in said at least one linear node template. However, Layman in an analogous art teaches in a manner such as “the step of creating and storing a begin option node template in said at least one linear node template.” (E.g. see Figure 2a-2c, heading 1 and Figure 3, node 19 and associated text). Therefore, it would have been obvious to incorporate the teaching of Layman into the teaching of AAPA to include begin option node template. The modification would have been obvious because one of ordinary skill in the art would have been motivated to make a selection from a set of options available in a computer program conveniently.

As per Claim 3, the rejection of claim 1 is incorporated and AAPA does not explicitly disclose the step of creating and storing a next option node template in said at least one linear node template. However, Layman in an analogous art teaches in a manner such as “the step of creating and storing a next option node template in said at least one linear node template.” (E.g. see Figure 2a-2c, subheading 2 and/or 3). Therefore, it would have been obvious to incorporate the teaching of Layman into the teaching of AAPA to include next option node template. The modification would have been obvious because one of ordinary skill in the art would have been motivated to make a selection from a set of options available in a computer program conveniently.

As per Claim 4, the rejection of claim 1 is incorporated and AAPA does not explicitly disclose the step of creating and storing an end option node template in said at least one linear

node template. However, Layman in an analogous art teaches in a manner such as “the step of creating and storing an end option node template in said at least one linear node template.” (E.g. see Figure 2a, entry 4-7). Therefore, it would have been obvious to incorporate the teaching of Layman into the teaching of AAPA to include end option node template. The modification would have been obvious because one of ordinary skill in the art would have been motivated to make a selection from a set of options available in a computer program conveniently.

As per Claim 5, the rejection of claim 1 is incorporated and AAPA does not explicitly disclose the step of creating and storing a begin option node template, a next option node template, and an end option node template in said at least one linear node template. However, Layman in an analogous art teaches in a manner such as “the step of creating and storing a begin option (E.g. see Figure 2a-2c, heading 1 and Figure 3, node 19 and associated text) node template, a next option (E.g. see Figure 2a-2c, subheading 2 and/or 3) node template, and an end option (E.g. see Figure 2a, entry 4-7) node template in said at least one linear node template”. Therefore, it would have been obvious to incorporate the teaching of Layman into the teaching of AAPA to include begin, next and end options node template. The modification would have been obvious because one of ordinary skill in the art would have been motivated to make a selection from a set of options available in a computer program conveniently.

As per Claim 6, the rejection of claim 1 is incorporated and AAPA does not explicitly disclose filtering said linear command regeneration template to locate said at least one linear node template. However, Layman in an analogous art teaches in a manner such as “filtering said

linear command regeneration template to locate said at least one linear node template.” (E.g. see Figure 1a, filtering Letter ‘P’; Figure 1b, filtering letters ‘PE’). Therefore, it would have been obvious to incorporate the teaching of Layman into the teaching of AAPA to include filtering to locate node template. The modification would have been obvious because one of ordinary skill in the art would have been motivated to make a selection from a set of options available in a computer program conveniently.

As per Claim 7, the rejection of claim 1 is incorporated and AAPA does not explicitly disclose scanning the linear command regeneration template to find a begin option node template, said begin option node template including an identification. However, Layman in an analogous art teaches in a manner such as “scanning the linear command regeneration template to find a begin option node template (E.g. see Figure 3, node 15 and associated text), said begin option node template including an identification (E.g. see Figure 2a-2c, heading 1 and col. 3:16-25, heading 1)”. Therefore, it would have been obvious to incorporate the teaching of Layman into the teaching of AAPA to include an identification of the begin option in the linear node template. The modification would have been obvious because one of ordinary skill in the art would have been motivated to make a selection from a set of options available in a computer program conveniently.

As per Claim 9, the rejection of claim 7 is incorporated and further the combination teaching of AAPA and Layman teaches:

“scanning said linear command regeneration template to find an end option node template that includes said identification of begin option node template.” (Again, see as noted above of Claim 7, e.g. see Layman Figure 3, node 17).

As per Claim 10, the rejection of claim 6 is incorporated and further the combination teaching of AAPA and Layman teaches:

“passing said linear node template from the linear command regeneration template to an evaluate branches process.” (Again, see as noted above of Claim 6, e.g. see Layman col. 3:9-25 for deleting non match member(s)).

As per Claim 11, the rejection of claim 10 is incorporated and further the combination teaching of AAPA and Layman teaches:

“evaluating at least. One branch in said filtered linear node template from the linear command regeneration template by said evaluate branches process.” (E.g. see Layman col. 3:9-25, branch, sub-branch and for deleting non match member(s)).

As per Claim 12, the rejection of claim 10 is incorporated and further the combination teaching of AAPA and Layman teaches:

“finding a branch in said filtered linear node template.” (E.g. see Layman col. 3:16-25 for example subheading 2 and/or 3).

As per Claim 13, the rejection of claim 12 is incorporated and further the combination teaching of AAPA and Layman teaches:

“validating said branch based on data from said configuration database.” (E.g. see Layman col. 3:21-25 for valid entry 5 & 6).

As per Claims 15-20 and 22-24, the rejection of claim 14 are incorporated and are rejected under the same reason set forth in connection of the rejection of claims 2-11 respectfully.

As per Claim 25, the rejection of claim 23 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 12.

As per Claim 26, the rejection of claim 25 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 13.

As per Claims 41 -46, the rejection of claim 40 are incorporated and are rejected under the same reason set forth in connection of the rejection of claims 2 -7 respectfully.

As Per Claim 47, AAPA teaches a method of automatically re-constructing a network device configuration command based on configuration data stored in the network device, wherein parsing and processing of the configuration command resulted in storage of the configuration data, wherein the command comprises at least one command element that can have a plurality of values, the method comprising the computer-implemented steps of:

“regenerating the command based on the linear command regeneration template and based on data from said configuration data stored in the network device” (E.g. see SPEC, page 2, lines 1-5).

“creating and storing at least one linear node in a parse tree for representing said at least one command element (E.g. see SPEC, page 1, lines 17-23 and Fig 1 (Prior Art) and associated text)”. AAPA does not explicitly disclose the step of creating and storing a begin option node template, a next option node template, and an end option node template in said at least one linear node template. However, Layman in an analogous art teaches in a manner such as “the step of creating and storing a begin option (E.g. see Figure 2a-2c, heading 1 and Figure 3, node 19 and associated text) node template, a next option (E.g. see Figure 2a-2c, subheading 2 and/or 3) node template, and an end option (E.g. see Figure 2a, entry 4-7) node template in said at least one linear node template.”. Therefore, it would have been obvious to incorporate the teaching of Layman into the teaching of AAPA to include begin, next and end options node template. The modification would have been obvious because one of ordinary skill in the art would have been motivated to make a selection from a set of options available in a computer program conveniently.

AAPA does not explicitly disclose information identifying how to regenerate a command. However, Layman in an analogous art teaches in a manner such as “information identifying how to regenerate a command.” (E.g. see Layman Figure 3, node 17). Therefore, it would have been obvious to incorporate the teaching of Layman into the teaching of AAPA to include information identifying how to regenerate a command. The modification would have been obvious because

one of ordinary skill in the art would have been motivated to make a selection from a set of options available in a computer program conveniently.

As per Claim 48, the rejection of claim 47 is incorporated and further the combination teaching of AAPA and Layman teaches:

“wherein creating and storing at least one linear node further comprises connecting a plurality of branches to said begin option node (E.g. see Layman Figure 2a-2c, heading 1 and Figure 3, node 19 and associated text)”.

As per Claim 49, the rejection of claim 48 is incorporated and further AAPA teaches:

“wherein each branch in said plurality of branches represents a different value of said at least one command element (E.g. see Fig 1 (Prior Art) and associated text)”.

As per Claim 50, the rejection of claim 48 is incorporated and further the combination teaching of AAPA and Layman teaches:

“wherein each branch is associated with a next option node (E.g. see Layman Figure 2a-2c, subheading 2 and/or 3)”.

As per Claim 51, the rejection of claim 47 is incorporated and further AAPA teaches:

“wherein said parse tree further comprises a binary node (E.g. see SPEC, page 1, line 19)”.

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As per Claim 52, the rejection of claim 47 is incorporated and further the combination teaching of AAPA and Layman does not explicitly disclose "wherein said command includes another command element that can have a plurality of values, said method further comprising representing said another command element by another linear node in said parse tree wherein said another linear node comprises a second being option node having a single entrance connected to said exit of said end option node, a second next option node coupled to said another begin option node, and a second end option node coupled to said another begin option node wherein said another end option node has a single exit". It would have been obvious to add another linear node to the art taught by AAPA and Layman so that more tree layers and nodes could be processed without increasing the execution time.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Correspondence Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang J Tang whose telephone number is 703-305-4866. The examiner can normally be reached on 8:30AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on 703-305-4552. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

After October 25, 2004, examiner can be reached at new telephone number (571) 272-3705, and the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3695.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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